

REMARKS

The final Office Action mailed November 2, 2006 has been carefully reviewed and the following remarks have been made in consequence thereof.

Claims 1-16 are pending in this application. Claims 1-12 stand rejected. Claims 13-16 are withdrawn from consideration as being directed to a non-elected invention.

The rejection of Claims 1-12 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,003,182 to Song (hereinafter referred to as "Song") in view of U.S. Patent No. 5,439,019 to Quandt et al. (hereinafter referred to as "Quandt") is respectfully traversed.

Song describes a washer including a water supplier (22) having valves (22a, 22b) for supplying hot water and cold water into a washtub (27), a water supply driver (20) for controlling the opening or closing of each valve (22a, 22b), a water level detector (26) for sensing the level of water supplied into the washtub (27), a temperature detector (25) for sensing temperature of the water supplied into the washtub (27), a target temperature memory (24), a microcomputer (23) for controlling the function of the washer, and a washing mode selector (21) for enabling the data inputted by a user to be sent to the microcomputer (23). Water level detector (26) is used to determine if a predetermined volume of water has been reached. More specifically, the water level detector (26) determines whether a predetermined first cold water volume has reached a first target water level, H_C , and whether a predetermined hot water/second cold water volume has reached a second target water level, H_W , which is the same as the first target water level. The water level detector (26) also determines whether the water volume has reached a third target water level, H_T . Notably, Song does not describe a first pressure sensor positioned to sense a full fill level and a second pressure sensor positioned to sense an intermediate fill level. Rather, Song describes a single water level detector (26) used to determine a plurality of water levels H_C , H_W , and H_T .

Quandt describes a clothes washer (10) having a washtub (32), actuator control knobs (28a-28d) and a controller (36). Using the actuator control knobs (28a-28d), an operator

inputs the desired water temperature for the wash and rinse operations to the controller (36). The controller (36) computes and stores averages for the cold water temperature (T_c), the warm water temperature (T_w) and the flow rate (FR) of water from a mixing valve (38) into washtub (32). The washtub (32) has a plurality of pressure sensors (56a-56e) disposed at various levels. Pressure sensor (56a) is positioned at the lowest level and provides an output indicating when water is filled to the 9.95 gallon level. The fill rate (FR) is calculated by determining the time required to fill the washtub to a level corresponding to a particular pressure sensor (56a-e), and then dividing the gallons required to fill the washtub to that particular level by that measured time to fill to that level. It may be desirable to use pressure sensors (56a-e) as a cross-correlation for the fill time (FT). For example, if the preselected level through control knob (28b) is for a medium wash load level (V) that corresponds to 15.65 gallons, and the level sensor (56c) also corresponds to 15.65 gallons, then theoretically the pressure sensor (56c) should provide an output signal at the completion of the fill time (FT). Controller (36) also uses timer (58) and pressure sensors (56a-56e) practically implemented as a multiposition pressure switch to determine a historical average of the flow rate (FR) into the washtub (32).

Claim 1 recites a temperature control for a washing machine, the washing machine including a tub, a hot water valve, and a cold water valve, said temperature control comprising "a first pressure sensor positioned to sense a full fill level in said tub and configured to generate a full fill signal when the tub is full; a second pressure sensor positioned to sense an intermediate fill level, the intermediate fill level less than the full fill level and corresponding to an adjustment level in said tub, said second pressure sensor configured to generate an intermediate fill signal when the intermediate fill level is reached; and a controller operatively coupled to said first and second pressure sensors, and said hot and cold water valves, said controller configured to control said valves based on the fill signals from said pressure sensors to control a wash water temperature."

Neither Song nor Quandt, considered alone or in combination, describes or suggests a temperature control for a washing machine as recited in Claim 1. More specifically, neither Song nor Quandt, considered alone or in combination, describes or suggests a washing

machine including a first pressure sensor positioned to sense a full fill level in the tub and configured to generate a full fill signal when the tub is full, and a second pressure sensor positioned to sense an intermediate fill level, the intermediate fill level less than the full fill level and corresponding to an adjustment level in the tub, the second pressure sensor configured to generate an intermediate fill signal when the intermediate fill level is reached, as required by Applicant's claimed invention. Rather, in contrast to the present invention, Song describes a single water level detector 26 to determine various water levels H_C , H_W , and H_T , and Quandt describes a washtub having a plurality of sensors used to compute an average fill rate and using the plurality of sensors as a cross-correlation for the fill time.

Further, Applicant respectfully traverses the Examiner's assertion that "to have the sensors provided with multiple trips points is considered to be an obvious extension of the teachings of either Song or Quandt." Neither Song nor Quandt, alone or in combination, describes or suggests providing sensors with multiple trip points. Applicant respectfully requests that evidence be shown to support the Examiner's assertion.

Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Song in view of Quandt.

Claims 2-5 depend from independent Claim 1. When the recitations of Claims 2-5 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claims 2-5 likewise are patentable over Song in view of Quandt.

Claim 6 recites a washing machine comprising "a tub; a cold water valve for controlling flow of cold water to said tub; a hot water valve for controlling flow of hot water to said tub; a first pressure sensor positioned to sense a full fill level in said tub and configured to generate a full fill signal when the tub is full; a second pressure sensor positioned to sense an intermediate fill level, the intermediate fill level less than full and corresponding to an adjustment level in said tub, said second pressure sensor configured to generate an intermediate fill signal when the intermediate fill level is reached; and a controller operatively coupled to said first and second pressure sensors and said hot and cold

water valves, said controller operable to control said valves based on the fill signals from said pressure sensors to control a wash water temperature.”

Neither Song nor Quandt, considered alone or in combination, describes or suggests a washing machine, as recited in Claim 6. More specifically, neither Song nor Quandt, considered alone or in combination, describes or suggests a washing machine including a first pressure sensor positioned to sense a full fill level in the tub and configured to generate a full fill signal when the tub is full, and a second pressure sensor positioned to sense an intermediate fill level, the intermediate fill level less than full and corresponding to an adjustment level in the tub, the second pressure sensor configured to generate an intermediate fill signal when the intermediate fill level is reached, as required by Applicant’s claimed invention. Rather, in contrast to the present invention, Song describes a single water level detector used to determine various water levels H_C , H_W , and H_T , and Quandt describes a washtub having a plurality of sensors used to compute an average fill rate and using the plurality of sensors as a cross-correlation for the fill time.

Accordingly, for at least the reasons set forth above, Claim 6 is submitted to be patentable over Song in view of Quandt.

Claims 7-12 depend from independent Claim 6. When the recitations of Claims 7-12 are considered in combination with the recitations of Claim 6, Applicant submits that dependent Claims 7-12 likewise are patentable over Song in view of Quandt.

Moreover, Applicant respectfully submits that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. Neither Song nor Quandt, considered alone or in combination, describes or suggests the claimed invention. Further, in contrast to the Examiner’s assertion within the Office Action, Applicant respectfully submits that it would not be obvious to one skilled in the art to combine Song and Quandt because there is no motivation to combine the references suggested in the art.

Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicant's own teaching.


As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP §2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicants' disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion nor motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Further, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. It is also impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Because there is no teaching or suggestion in the cited art for the combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for these reasons, Applicant requests that the Section 103 rejection of the claims be withdrawn.

For at least the reasons set forth above, Applicant respectfully requests that the Section 103 rejection of Claims 1-12 be withdrawn.

In view of the foregoing remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully submitted,



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